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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Hideaki Mita

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EXAMINER

DAZENSKI, MARC A

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/555,708	Applicant(s) MITA ET AL.	
	Examiner MARC DAZENSKI	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 40-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 40-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11-04-2005 & 5-05-2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 40-42, 44-45, 49, and 51-53 are rejected under 35 U.S.C. 102(b) as being anticipated by Satoshi (Japanese Patent Application Publication 2000-182358), hereinafter referred to as Satoshi.

Regarding **claim 40**, Satoshi discloses an information recording method and information reproducing method. Further, Satoshi discloses an apparatus that records data of a continuous prescribed unit ranging over two or more media, the data being a video signal of NTSC standard, the data being for example comprised of two files “XXX” and “YYY” that are recorded on disks “Movie A” and “Movie B”, which reads on the claimed, “a recording apparatus which time-divides a stream of continuous video or audio signals having a specific discrimination ID into a first stream and a second stream, records the first stream on a first recording medium as a first file, and records the second stream on a second recording medium as a second file,” as disclosed at paragraphs [0006], [0016], and [0028], as well as exhibited in drawing 1;

“the movie B” is recorded on the control file of the title YYY of the disk of “the movie A” as a label of the following disk, as well as “the movie A” is memorized by the

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control file of the title YYY of the disk of "the movie B" as a label of a front disk, which reads on the claimed, "first management information related to the second file or the second recording medium is recorded on the first recording medium in association with the first file, or second management information related to the first file or the first recording medium is recorded on the second recording medium in association with the second file," as disclosed at paragraph [0028]; and

the file of the same title as the title YYY of the disk of "the movie A" is recorded on the disk of the label "movie B" and the "the movie B" is recorded on the control file of the title YYY of the disk of "the movie A" as a label of the following disk, which reads on the claimed, "the discrimination ID of the stream of the continuous video or audio signals common in the first stream and the second stream is recorded on the first recording medium in association with the first file and recorded on the second recording medium in association with the second file," as disclosed at paragraph [0028] and exhibited in drawing 3.

Regarding **claim 41**, the limitations of the claim are rejected in view of the explanation set forth in claim 40 above.

Regarding **claim 42**, Satoshi discloses everything claimed as applied above (see claim 41). Further, Satoshi discloses starting recording by the disk unit (5) by which recording instruction is made via the final controlling element (1) after being equipped with a disk, this recording being performed until the disk (6) is removed or directions of the end of record are made by the final controlling element (1), which reads on the claimed, "wherein recording end time of the first video file and recording end time of the

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first audio file are caused to coincide with each other, and recording start time of the second video file and recording start time of the second audio file are caused to coincide with each other," as disclosed at paragraph [0031].

Regarding **claim 44**, Satoshi discloses everything claimed as applied above (see claim 40). Further, Satoshi discloses a management file which stores the information for managing an entire disk, which reads on the claimed, "wherein the first or second management information is written in a management information file," as disclosed at paragraph [0021] and exhibited in drawing 3.

Regarding **claim 45**, Satoshi discloses everything claimed as applied above (see claim 40). Further, Satoshi discloses a management file which stores the information for managing an entire disk and holds information including "disk identification label" as well as "disk-swapping information (Pre)" and "disk-swapping information (Next)," which reads on the claimed, "wherein the first management information related to the second recording medium or the second management information related to the first recording medium includes ID information which specifies a recording medium," as disclosed at paragraph [0022] and exhibited in drawing 3.

Regarding **claim 49**, the examiner maintains that the claim is the corresponding method to the apparatus of claim 41, and therefore the limitations of the claim are rejected in view of the explanation set forth in claim 41 above.

Regarding **claim 51**, Satoshi discloses everything claimed as applied above (see claim 49). Further, Satoshi discloses in response to a display prompt to "exchange for a disk 'movie B'" a user exchanges for the disk of "the movie B" after an appropriate time,

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which reads on the claimed, “wherein the destination recording medium is switched from the first recording medium to the second recording medium,” as disclosed at paragraphs [0029] – [0030].

Regarding **claim 52**, Satoshi discloses everything claimed as applied above (see claim 49). Further, the limitations of the claim are rejected in view of the explanation set forth in claim 45 above.

Regarding **claim 53**, Satoshi discloses everything claimed as applied above (see claim 49). Further, the limitations of the claim are rejected in view of the explanation set forth in claim 45 above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 43, 46, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Satoshi (Japanese Patent Application Publication 2000-182358), hereinafter referred to as Satoshi, in view of Komori (US Patent 7,274,862), hereinafter referred to as Komori.

Regarding **claim 43**, Satoshi discloses everything claimed as applied above (see claim 41). However, Satoshi fails to disclose wherein, when a frame frequency of the video signals is different from a sample frequency of the audio signals, the video signals

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and the audio signals are synchronized with each other in association with audio signals the number of which is a predetermined number of samples every predetermined number of frames. The examiner maintains that it was well known to include the missing limitation, as taught by Komori.

In a similar field of endeavor, Komori discloses an information processing apparatus. Further, Komori discloses video frames being 33ms long and audio frames being 24ms long, and then adjusting gap amount PTS_FS_SPLYCE for every GOP so that it is equal to gap amount PTS_FS thereby synchronizing the audio frame with the video frame, which reads on the claimed, "wherein, when a frame frequency of the video signals is different from a sample frequency of the audio signals, the video signals and the audio signals are synchronized with each other in association with audio signals the number of which is a predetermined number of samples every predetermined number of frames," as disclosed at column 3, lines 63-64; column 4, lines 6-7; column 5, lines 25-26; column 9, lines 45-50.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the information recording method and information reproducing method of Satoshi to include video frames being 33ms long and audio frames being 24ms long, and then adjusting gap amount PTS_FS_SPLYCE for every GOP so that it is equal to gap amount PTS_FS thereby synchronizing the audio frame with the video frame, as taught by Komori, for the purpose of ensuring that audio and video of a recorded program are reproduced in synchronization with each other upon reproduction.

Regarding **claim 46**, the combination of Satoshi and Komori discloses everything claimed as applied above (see claim 43). Further, Satoshi discloses the link information which specifies the reproduction sequence in the file concerned is recorded on the control file to the file concerned so that data may be located in a line on a time series on the file of the new disk concerned, and the reproduction sequence is corrected with a pointer so that the data held at the reserve disk unit may be reproduced previously, which reads on the claimed, "wherein a sequence number of a head frame of recording start of the first or second file is recorded on the first or second management information file," as disclosed at paragraph [0034].

Regarding **claim 48**, Satoshi discloses everything claimed as above (see claim 40). However, Satoshi fails to disclose wherein, when the video signals are MPEG-compressed signals, the stream of the video signals is time-divided immediately before the head of a GOP. The examiner maintains that it was well known to include the missing limitations, as taught by Komori.

In a similar field of endeavor, Komori discloses an information processing apparatus. Further, Komori discloses data using a transport stream of MPEG-2, data for one GOP including a local header (60), the local header (60) including positional information indicating positions of the Video_Header (62), the Audio_Header (63), and the VIDEO/AUDIO data (64) in this block and information on a time for playing by the Recording Unit, which reads on the claimed, "wherein, when the video signals are MPEG-compressed signals, the stream of the video signals is time-divided immediately

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before the head of a GOP," as disclosed at column 5, lines 40-49 and exhibited in figure 7.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the information recording method and information reproducing method of Satoshi to include data using a transport stream of MPEG-2, data for one GOP including a local header (60), the local header (60) including positional information indicating positions of the Video_Header (62), the Audio_Header (63), and the VIDEO/AUDIO data (64) in this block and information on a time for playing by the Recording Unit, as taught by Komori, for the purpose of minimizing the interframe search time associated with reproducing a compressed video stream.

Claims 47 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Satoshi (Japanese Patent Application Publication 2000-182358), hereinafter referred to as Satoshi, in view of well known prior art (see MPEP 2144.03).

Regarding **claim 47**, Satoshi discloses everything claimed as applied above (see claim 41). However, Satoshi fails to disclose wherein, when the video signals are MPEG-compressed video signals, increases in file size D_t of the first video file and the first audio file at the end of 2 continuous GOPs are predicated by the following equation at the start of each GOP, a recordable remaining capacity of the first recording medium is compared with the D_t , and it is determined that destination recording media are switched when the remaining capacity is smaller than the D_t :

$$D_t = (D_a \times 2M) + ((R_{\max}/F_{\text{num}}) \times 2M)$$

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M: the number of frames of one GOP

Da: Audio data size in one frame unit

Rmax: maximum rate (Max rate) of MPEG in VBR

Fnum: frame frequency.

However, the examiner takes Official Notice that it was well known in the art to switch to a different recording medium when a predetermined recording capacity threshold is reached, for the purpose of ensuring continuous and uninterrupted recording of a data stream over multiple recording media.

Regarding **claim 50**, Satoshi discloses everything claimed as applied above (see claim 49). Further, the limitations of the claim are rejected in view of the explanation set forth in claim 47 above.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Moon et al (US Patent 7,085,475) discloses method and apparatus for recording manufacturer information on a recording medium and for determining whether the manufacturer information is effective.

Hatae et al (US PgPub 2002/0003941) discloses remaining recordable time calculation apparatus that converts amount of free area of recording medium into time.

Ino et al (US Patent 6,292,626) discloses reproduction apparatus, recording apparatus and recording/reproducing apparatus.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARC DAZENSKI whose telephone number is (571)270-5577. The examiner can normally be reached on M-F, 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571)272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Marsha D. Banks-Harold/
Supervisory Patent Examiner, Art Unit 2621

/MARC DAZENSKI/
Examiner, Art Unit 2621